What is claimed is:

1. A manufacturing method for fine hollow polyester filaments, which is heating polyester polymer of inherent viscosity(IV) 0.5 ~ 0.7 and melting point of 245 ~ 265℃ to melt, filter and extruding in constant amount to obtain polyester fine hollow filaments, characterized in comprising the following steps:

a. uniformly spinning said constant amount extruded polyester melt through a multi-layer annularly arranged spinneret orifices to obtain the filament tow , wherein the diameter of outermost layer orifice is set as D_2 mm , and the diameter of innermost layer orifice is set as D_1 mm ;

b. passing said spun filament tow under spinneret through a protective delay shroud of length L_s mm and a cylindrical quenching air tube of length L_q mm and diameter of D_0 mm which offers the radial outer-flow quenching air at wind speed of 0.2- 0.6 meter / second to said filament tow from the outer side of said cylindrical quenching air tube to uniformly cooled to below glass transition point (T_g) of said polyester polymer for bundling;

c. said D_2, D_1, D_0, L_s, L_q satisfying the following requirements:

(i) $D_2-D_1 \leqq 20$ (mm)

(ii) $12 \leqq D_1-D_0 \leqq 33$ (mm)

(iii) $2 \leqq Ls \leqq 8060 \times$ throughput (g/min) ÷(No. of filaments)^2 (mm)

(iv) $15 \leqq Lq \leqq 40$(cm)

d. winding said filament tow at the speed of 1800 to 4000 meter / minute.

2. The manufacturing method for fine hollow polyester filaments according to claim 1, wherein, the orifice density of spinneret layout (orifice density) is set as 7~15 orifices per square centimeter.

3. The manufacturing method for fine hollow polyester filaments according to claim 1, wherein, the fine hollow polyester filaments obtained has 0.3 to 2.5 denier per filament (d.p.f), uster half inert value (u% $_{1/2}$ inert) less than 0.3%, variation of thermal stress in spindles less than 4%, hollow degree from 25 to 40%.

4. A fine hollow polyester yarn, which is produced by draw-twist texturing, air –twist texturing or one-stage direct spinning and drawing the filaments manufactured by the manufacturing method for fine hollow polyester filaments according to claim 1 to get fine hollow polyester yarn having d.p.f 0.2 to 1.0d, hollow degree 25 to 40% in excellent dyeability and flat surface of fabrics woven or knitted from said yarn.